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The Humanistic Value of Archaeology. The Martin Classical Lectures, Volume IV. By Rhys Carpenter. Cambridge, Massachusetts: Harvard University Press (1933). Pp. v, 134. \$1.50.

(Concluded from page 69)

### III

#### THE DATE OF THE ADOPTION BY THE GREEKS OF THE PHOENICIAN ALPHABET<sup>38a</sup>

Professor Carpenter contends (51-63)<sup>38b</sup> that the Phoenician alphabet was taken over by the Greeks at about 700 B. C. His principal arguments are, first, that there was no *contact* between Greeks and Phoenicians before 750 and consequently the Greeks could not have taken over the Phoenician alphabet before that date, and, secondly, that a study of the letter forms of early Greek and Semitic inscriptions shows that the Greeks adopted the Phoenician alphabet at about 700. I have, however, shown in Part II of this review that his argument concerning the date when *contact* between Greeks and Phoenicians began cannot be accepted. A study of the letter forms of early Greek and Semitic documents has been made also by Professor B. L. Ullman<sup>38c</sup>. He concluded that the Greeks took over the Phoenician alphabet at some time between the fourteenth century and the twelfth century B. C. I believe that the evidence now at our disposal justifies the conclusion that the Phoenician alphabet was adopted by the Greeks in the latter part of the ninth century B. C.

There is, as yet, no consensus concerning the origin and the development of the Semitic alphabet<sup>39</sup>. There

is reason, however, to believe that it was employed in Canaan in the fourteenth century<sup>40</sup>. But the use of cuneiform was then still predominant in Canaan<sup>41</sup>. Only cuneiform documents were found, at Ras Shamra, in the library and the writing school which were destroyed in the twelfth century<sup>42a</sup>. The earliest extant inscription written in the Semitic alphabet proper—the Semitic alphabet to which the Greek alphabet was so closely related—is the inscription on the sarcophagus of King Ahiram at Byblos<sup>42</sup>, found about ten years ago. This is usually assigned to about 1250 B. C. The form of the Phoenician alphabet as it existed before this inscription was cut is not definitely known. However in 1933 some new inscriptions, in an unknown script (an earlier form of the Phoenician alphabet?) were found at Byblos<sup>43</sup>. Consequently, in the present state of our knowledge it is only with misgiving that we may assign to a time much before 1200 a form of the Semitic alphabet to which the Greek alphabet may be at all closely related. Few early inscriptions in this form of the Semitic alphabet have been preserved. Besides the inscription on the sarcophagus of King Ahiram, only four inscriptions may be assigned to a date between 1200 and 1000 B. C. There is reason, therefore, to believe that the Semitic alphabet was used only sparingly before 1200 and that Phoenician merchants had not adopted it before 1200. One must accept this conclusion with reservations, for it is based, to a certain extent, on negative evidence. At present, there is no proof that the Semitic alphabet was so widely used before 1200 that the Greeks could have become sufficiently acquainted with it to have adapted it by that time to their own use.

The only inscriptions of a date earlier than 1200 which have been found on the mainland of Greece are written in a special variety of the script that was employed in Crete<sup>44</sup>. With the exception of an inscription found at Asine, in the Peloponnesus, about ten years ago, these inscriptions consist of from one to three, rarely four or five, signs. This writing was apparently used only for putting brands on vessels. In Crete, where many clay tablets inscribed with similar writing were

<sup>38a</sup>Since the earliest extant Semitic inscriptions are written in the Phoenician alphabet, which is a Semitic local alphabet, I have, in my discussion of early Semitic inscriptions, used interchangeably the terms "Phoenician alphabet" and "Semitic alphabet".

<sup>38b</sup>Compare also Rhys Carpenter, *The Antiquity of the Greek Alphabet*, American Journal of Archaeology 37 (1933), 8-29.

<sup>38c</sup>B<erthold> L<ouis> Ullman, *The Origin and Development of the Greek Alphabet*, American Journal of Archaeology 31 (1927), 311-328, especially 326-327; *Ancient Writing and Its Influence*, 2<sup>1</sup> (New York, Longmans, 1932). This is a volume in the Series entitled *Our Debt to Greece and Rome*.

<sup>39</sup>Some scholars think that the Semitic alphabet was derived from Egyptian hieroglyphs. See Martin Sprengling, *The Alphabet, Its Rise and Development from the Sinai Inscriptions, Oriental Institute Communications*, No. 12, 54-65 (The University of Chicago Press, 1931). <For a brief notice, by Dr. Moses Hadass, of this book, see THE CLASSICAL WEEKLY 25, III, C. K. >. Compare A<lbert> T<en Eyck> Olmstead, *History of Palestine and Syria to the Macedonian Conquest*, 90-93, 239-240 (New York, Scribner, 1931); Ullman, American Journal of Archaeology 31 (1927), 311-328 (see note 38c, above). Fernand Chapouthier, *Les Ecritures Minoennes au Palais de Malia*, 62-74 (Paris, Geuthner, 1930), maintains that the Phoenicians adopted the Minoan syllabary. Compare John Strong Newberry, *The Prehistory of the Alphabet*, Harvard Studies in Classical Philology 45 (1934), 105-156, especially 111-112, 154. Johannes Sundwall, *Die Entstehung des Phönizischen Alphabets und Die Kretische Schrift*, 1-10, Acta Academiae Åboensis, Humaniora, Volume 7, fourth article in the volume (1931), holds that the Phoenician alphabet was influenced in its development by both the Egyptian and the Cretan systems of writing.

<sup>40</sup>W<illiam> F<oxwell> Albright, Notes on Early Hebrew and Aramaic Epigraphy, The Journal of the Palestine Oriental Society 6 (1926), 75-102, especially 84.

<sup>41</sup>Sprengling, *The Alphabet* . . . , 56-57 (see note 39, above).

<sup>42a</sup>Friedrich, Ras Shamra . . . , 9-10 (see note 28, above).

<sup>42</sup>René Dussaud, *Les Inscriptions Phéniciennes du Tombeau d'Ahiram, Roi de Byblos, Syria* 5 (1924), 135-157. Compare Syria 11 (1930), 179-180.

<sup>43</sup>W<illiam> F<oxwell> Albright, Excavations During 1933 in Palestine, Transjordan, and Syria, American Journal of Archaeology 38 (1934), 198, reports that he had oral information concerning these inscriptions.

<sup>44</sup>Johannes Sundwall, *Zur Vorgriechischen Festlandsschrift*, Klio 22 (1929), 228-231.

found, the situation was wholly different from that on the mainland of Greece. These considerations led Professor Nilsson to conclude that the inscriptions on the Greek mainland which antedate 1200 B.C. were written by a semibarbaric people that found the art of writing difficult—Greeks who had migrated into Greece at some time after 2000 B.C.<sup>44</sup> Certain scholars have seen in the inscriptions of Mycenaean date which were found at Asine (see above) confirmation of the idea that the Greek language was written in the Cretan syllabary, but their thesis cannot at present be proved<sup>45</sup>.

Professor Ullman, in an article (1927)<sup>46</sup>, maintained that "...On the whole, the forms of the Greek letters as compared with the earliest Phoenician favor a date between the fourteenth and twelfth centuries for the introduction of the Semitic script into Greek lands". In a book (1932) Professor Ullman wrote<sup>47</sup>:

... The earliest Greek alphabet has some resemblances to South Semitic as against North Semitic, especially in the form of lambda and sigma. Early Greek letters also agree better with those of the thirteenth-century Byblus inscription than with those of the ninth-century Moabite. Therefore it would seem necessary to assume that the Phoenician alphabet was brought to Greece some time before the thirteenth century B.C.—which brings us to the approximate date of Cadmus....

But in his article (1927) he wrote<sup>48</sup>:

... The early Greek alphabets can be quite as well derived from an alphabet like that used in the Byblus inscriptions as that found on the Moabite stone and other documents of about the same period....

Now, these Byblus inscriptions are assigned respectively to about 1250 and the last quarter of the tenth century. Therefore, if Professor Ullman adheres to the statement just quoted, he can maintain only that the Greeks *might* have adopted the Phoenician alphabet at some time between the thirteenth century and the end of the tenth century.

I have had two Tables prepared to show, accurately, the forms of the Semitic letters at various dates between the thirteenth century and the eighth century, and the forms of the letters which were employed in the inscriptions on the geometric pottery from Mount Hymettus and in other early Greek inscriptions<sup>49</sup>. Many

<sup>44</sup>Martin P. Nilsson, *Homer and Mycenae*, 78–79 (see note 3, above).

<sup>45</sup>See e. g. Paul Kretschmer, *Literaturberichte für die Jahre 1931 und 1932*, Griechisch, *Glotta* 22 (1934), 193–269, especially 199.

<sup>46</sup>Ullman, *The Origin and Development of the Alphabet*, *American Journal of Archaeology* 31 (1927), 311–328, especially 327.

<sup>47</sup>Ullman, *Ancient Writing*, ... 21 (see note 38c, above).

<sup>48</sup>Ullman, *American Journal of Archaeology* 31 (1927), 326 (see note 38c, above).

<sup>49</sup>I name here the publications from which the drawings were made:

(1) The inscription, in the Phoenician dialect, on the sarcophagus of King Ahiram at Byblus. See René Dussaud, *Les Inscriptions Phéniciennes du Tombeau d'Ahiram, Roi de Byblus*, *Syria* 5 (1924), 135–157. The drawings in Column 2 were made from the photographs of the squeezes of the inscription which appear on Plates XXXIX–XL of Dussaud's article, and from the photographs of the inscription to be found in Pierre Montet, *Byblus et Égypte, Quatre Campagnes de Fouilles, 1921–1922–1923–1924*, *Atlas, Plates CXXVIII, CXXX, and CXXXVIII–CXL* (Paris, Geuthner, 1929).

(2) The inscription, in the Phoenician dialect, of King Yehimilk of Byblus. See Maurice Dunand, *Nouvelle Inscription Phénicienne Archaique*, *Revue Biblique* 39 (1930), 321–331. The drawings in Column 3 were made from the photograph of the inscription on Plate XV of this article.

(3) The inscription, in the Phoenician dialect, on a spearhead from Rouesseh. See Paul-Emile Guigues, *Pointe de Flèche en Bronze à Inscription Phénicienne*, *Mélanges de l'Université Saint-Joseph, Beyrouth (Grand Liban)* 11 (1926), 325–328, and Sébastien

of the earlier Tables of this sort are inaccurate. Many of them had been copied from the Table which Dussaud<sup>50</sup> published in 1924. Dussaud's Table can not be relied upon. For example, his drawings of the *koph* and the *sayin* of the inscription of King Barrekoub at Sendschirli are absolutely misleading. In addition, the majority of the Tables contained no variant forms of the

Ronzevalle, *Note sur le Texte Phénicien de la Flèche*, *Publiée par M. P.-E. Guigues, Mélanges de l'Université Saint-Joseph, Beyrouth (Grand Liban)* 11 (1926), 329–358. The drawings in Column 4 were made from the photographs of the spearhead on Plate III of the latter article. René Dussaud (*Syria* 8 [1927], 185–186) thinks that this inscription was engraved in the tenth century.

(4) The inscription, in the Phoenician dialect, on the statue of Osorkon I which was dedicated by King Eliba al of Byblus (928 B.C.). See René Dussaud, *Dedicace d'une Statue d'Osorkon I par Eliba'al, Roi de Byblus*, *Syria* 6 (1925), 101–117. The drawings in Column 5 were made from the photograph of the inscription on Plate XXV of this article.

(5) The inscription, in the Phoenician dialect, on the pedestal of the statue of King Chechanq I (947–925 B.C.) which bears the name of King Abiba'al of Byblus. See René Dussaud, *Syria* 5 (1924), 145–147. The drawings in Column 6 were made from Plate XLII of this article.

(6) The inscription, in the Moabite (Hebrew) dialect, on the Moabite Stone. See G. A. Cooke, *A Text-Book of North-Semitic Inscriptions*, 1–14 (Oxford: At the Clarendon Press, 1903), and Mark Lidzbarski, *Handbuch der Nordsemitischen Epigraphik nebst Ausgewählten Inschriften*, 1, 103–104, 416–417, 2, Plate I (Weimar, Felber, 1898). The drawings in Column 7 were made from Lidzbarski's Plate.

(7) The inscription, in the Phoenician dialect, of King Kalamu of Sendschirli. See Mark Lidzbarski, *Ephemeris für Semitische Epigraphik* 3 (1909–1915), *Eine Phönizische Inschrift aus Zenschirli*, 218–238 (Giessen, Topelmann [formerly Ricker], 1915), and *Ausgrabungen in Sendschirli im Auftrage des Orient-Comités zu Berlin*, 4, 374–377 (Berlin, Reimer, 1911). The drawings in Column 8 were made from the schematic sketch of the inscription in Figure 273 of the work last named (page 375).

(8) The inscription, in the Aramaic dialect, on the statue of the god Hadad at Sendschirli. See *Ausgrabungen in Sendschirli im Auftrage des Orient-Comités zu Berlin*, 1, 49–52 (Berlin, Spemann, 1893). The title-page carries the following notation: "1902 übergegangen in den Verlag von Georg Reimer Berlin". The drawings in Column 9 were made from the photograph of the inscription on Plate VII.

(9) The inscription, in the Aramaic dialect, on the stela of King Panammu at Sendschirli. See *Ausgrabungen in Sendschirli*, ... 1, 55–84 (see [8], above, in this note). The drawings in Column 10 were made from the drawing of the inscription on Plate VIII.

(10) The inscription, in the Aramaic dialect, of King Barrekoub, on a building block at Sendschirli. See *Ausgrabungen in Sendschirli*, ... 4, 377–380 (see [7], above, in this note). The drawings in Column 11 were made from the photograph of the inscription and the sketch of the inscription in Figures 275 and 276 (page 379).

(11) The inscription, in the Phoenician dialect, on the Cyprus Bowl. See Eduard Meyer, *Geschichte des Altertums*<sup>2</sup>, Volume 2, Part 2, 126 (see note 20, above), and Mark Lidzbarski, *Handbuch der Nordsemitischen Epigraphik*, ... 1, 118 and 176, 2, Plate II, 1 (see [6], above, in this note). The drawings in Column 12 were made from the inscription as it appears on Lidzbarski's Plate.

(12) The inscriptions on geometric pottery from Mount Hymettus. See Carl Wiliam Blegen, *Inscriptions on Geometric Pottery from Hymettos*, *American Journal of Archaeology* 38 (1934), 10–28, and Plate III. The drawings in Column 13 were made from Blegen's Plate.

(13) In Column 14, I have not been able to include all the variant forms of every letter. The drawings in this column were made from Wilhelm Larfeld, *Griechische Epigraphik*, Plate III, at the end of the volume (Munich, Beck, 1914), and from Herman Roehl, *Imagines Inscriptionum Graecarum Antiquissimarum in Usu Scholarum* (Berlin, Reimer, 1907).

In my discussion of the letter forms of the early Semitic alphabet, I have not taken into account the inscriptions from Nora, in Sardinia, and the inscriptions on the *ostraca* from Samaria. There is great disagreement concerning the date of the Nora inscriptions. See G. A. Cooke, *A Text-Book of North-Semitic Inscriptions*, 110–111 (see [6], above, in this note); Mark Lidzbarski, *Handbuch der Nordsemitischen Epigraphik*, ... 1, 120, 177 (see [6], above, in this note); G. George Contenau, *Manuel d'Archéologie Orientale*, 1, 257 (Paris, Picard, 1927). I have not discussed the inscriptions on the *ostraca* from Samaria because it is not certain whether they belong to a date within the eighth century, or to a date within the ninth century. See George Andrew Reisner, Clarence Stanley Fisher, and David Gordon Lyon, *Harvard Excavations at Samaria, 1908–1910*, 1, 227 (Harvard University Press, 1924).

In Column 13 *upsilon* appears in the space allotted to *sau*, *phi* in the space allotted to *theta*, and *chi* in the space allotted to *theta*, because of my belief that *upsilon* may have been developed out of Semitic *sau*, *phi* out of Greek *pi* and *theta*, and Eastern Greek *chi* out of Greek *theta*. See Martin P. Nilsson, *Die Übernahme und Entwicklung des Alphabets durch die Griechen*, 22–23, Kgl. Danske Videnskabernes Selskab, *Historisk-filologiske Meddelelser*, 1, 6 (Copenhagen, 1918); Ullman, *American Journal of Archaeology* 31 (1927), 326, note 3 (see note 38c, above).

In discussing the letter forms of the Semitic inscriptions I have, for the sake of simplicity, employed the modern equivalent letters.

<sup>50</sup>aDussaud, *Syria* 5 (1924), 149.

different letters; they did not even indicate that such variant forms existed. I have, therefore, had reproduced in my Tables variant forms of significant letters. The drawings were made, under my immediate supervision, by Mr. Gilbert Bischoff, a student in the School of Architecture of Columbia University.

Let us now consider the grounds on which Professor Ullman concluded that the Greeks adopted the Phoenician alphabet at some time between the fourteenth century and the twelfth century<sup>31</sup>. He maintains, first, that H, L, P, and T in the Semitic inscriptions of the thirteenth century and the tenth century are more like the corresponding Greek letters than they are in the ninth century and in the eighth century. However, the H nearest the corresponding Greek letter is to be found in a tenth-century inscription from Byblos, and the same letter in earlier inscriptions at Byblos is almost as near to Greek *eta*. Only one H which is very close to Greek *eta* can be found in Semitic inscriptions after the tenth century. This H, which resembles very closely Greek *eta*, appears in a ninth-century Hebrew inscription from Gezer. L is, indeed, very close to Greek *lambda* in inscriptions at Byblos between the thirteenth century and the tenth century. But Professor Ullman errs when he writes that L is more like Greek *lambda* in earlier than in later Semitic documents. In three inscriptions of the eighth and the ninth centuries at Sendschirli L is equally as near early Greek *lambda*, and one of the forms of L on the Cyprus Bowl resembles very closely the preceding letters of that form. At Byblos in the thirteenth century P tends to develop into a form very much like early Greek *pi*. In the twelfth and the tenth centuries at Byblos P is somewhat closer to the corresponding Greek letter, in spite of the peculiar curve of the tail strokes. A P which is very similar to Greek *pi* appears first on the so-called Moabite Stone in the middle of the ninth century, and a P similar to that of the Moabite Stone appears in the inscription of King Barrekoub at Sendschirli in the second half of the eighth century. In no instance is T at Byblos between the thirteenth century and the tenth century as near Greek *tau* as is the same letter in eighth-century and ninth-century inscriptions at Sendschirli and on the Cyprus Bowl. Professor Ullman thinks that the B of the thirteenth century at Byblos is much nearer Greek *beta* than the later Semitic B is: he thinks so because the letter at Byblos has its bottom stroke parallel to the base of the triangle. The fact that this form is nearer the original Egyptian hieroglyphic from which Phoenician *beth* originated than is the B of the Moabite Stone convinces Professor Ullman that a form of B like that at Byblos, but even earlier than the one that appeared in the thirteenth-century inscription, provided the immediate suggestion of Greek *beta*. We may observe that the B of eighth-century and ninth-century inscriptions at Sendschirli is almost, if not equally, as near Greek *beta* as the B at Byblos in the thirteenth century is. Professor Ullman maintains with regard to L and S in the thirteenth century inscription at Byblos the position that he held with regard to B. We have seen

that the L of three eighth-century and ninth-century inscriptions at Sendschirli is no farther removed from Greek *lambda* than the L at Byblos is, and that the L of the Cyprus Bowl is just as near to Greek *lambda*. S remains fairly constant in form in early Semitic inscriptions. Professor Ullman's contention that forms of B, L, and S even earlier than those that appeared in the thirteenth century provided the immediate suggestion of the corresponding Greek letters will be proved correct only when Semitic inscriptions of a date earlier than the thirteenth century have been found to contain the forms which he postulates. Professor Ullman notes that once V at Byblos in the thirteenth century is angular. But an angular V appears in the ninth-century inscription of King Kalamu at Sendschirli, and on the Moabite Stone.

There are additional objections to Professor Ullman's thesis. First, it would be very difficult indeed to develop Greek *kappa* out of the K of the Byblos inscriptions of the thirteenth, twelfth, and tenth centuries<sup>32</sup>. Secondly, M and N are, with respect to early Greek *mu* and *nu*, in a position similar to that of K. Thirdly, although a form of D in a tenth-century inscription at Byblos is very similar to Greek *delta*, the D at Byblos in the thirteenth and twelfth centuries was much farther removed from the corresponding Greek letter. Fourthly, the A at Byblos in the thirteenth century was far removed in form from Greek *alpha*. Indeed, not until the end of the tenth century is this letter at Byblos very close in form to Greek *alpha*.

Professor Carpenter maintains that a comparison of the letter forms of early Greek and Semitic inscriptions leads to the conclusion that the Greeks took over the Phoenician alphabet at a time when the Phoenicians employed letter forms like those which appear on the Cyprus Bowl (732-727), and in the inscriptions of King Panammu and King Barrekoub, which were inscribed at about the same time, at Sendschirli<sup>33</sup>. To defend his thesis he was compelled to assume that certain letter forms (those of *teth*, *samech*, and *koph*) which were employed in the inscription of the god Hadad<sup>34</sup> at Sendschirli in the first part of the eighth century were employed also in Semitic inscriptions of the second half of the eighth century, and to argue that the forms of the letters of the Phoenician alphabet of the period of the Cyprus Bowl may be deduced from certain inscriptions from Nerab as well as from the inscriptions mentioned above. The inscriptions from Nerab were carved in the latter part of the seventh century, possibly after 605<sup>35</sup>. Since the Greeks had certainly adopted the Phoenician alphabet long before 605, there is no need to discuss here the inscriptions from Nerab.

Professor Carpenter thinks that the resemblance of the A of the Cyprus Bowl to Greek *alpha* is much greater than is that of the A of Semitic inscriptions of

<sup>31</sup>A close examination of the photograph of the inscription and of the squeeze of the thirteenth-century inscription on the sarcophagus of King Ahiram at Byblos shows that K had, in some instances, a tail stroke. But even this form of K is not similar to Greek *kappa*.

<sup>32</sup>Rhys Carpenter, 8-29, especially 12-14 (see note 38b, above).

<sup>33</sup>Rhys Carpenter, 14 (see note 38b, above).

<sup>34</sup>Rhys Carpenter, 15 (see note 38b, above). For the date of the inscriptions from Nerab see Mark Lidzbarski, Handbuch der Nord-semitischen Epigraphik nebst Ausgewählten Inschriften, 1, 445 (Weimar, Felber, 1898), and G. A. Cooke, A Text-Book of North-Semitic Inscriptions, 186-187 (Oxford: At the Clarendon Press 1903).

Table I

<sup>2</sup>The figures in ( ) in both Tables give the date by century. The dates 850, 730, 730, 730, 750 are approximate dates.

Table II

<sup>1</sup>The figures in ( ) in both Tables give the date by century. The dates 850, 730, 730, 730, 750 are approximate dates.

earlier date, because the cross stroke of the A on the Cyprus Bowl is short, as in early Greek *alpha*. But, when one has made allowance for the relative size of the letters in question, he finds that an A with a similar short stroke was employed in tenth-century inscriptions at Byblos. Semitic A was, after the tenth century at Byblos, almost invariably similar to Greek *alpha*. The B of the Cyprus Bowl is the farthest removed from Greek *beta* of all the forms of that letter which appear in Semitic inscriptions between the thirteenth century and the eighth century. The resemblance of the B of the Moabite Stone to Greek *beta* is somewhat greater than that of the B of the Cyprus Bowl. All other forms of this letter are very similar to the corresponding Greek letter. At least four of the forms of D on the Cyprus Bowl are elongated triangles which have been turned on their sides. A fifth form may be construed as sitting upright after the fashion of Greek *delta*. Three of these five forms have tails. The D of inscriptions of the late eighth century at Sendschirli is rounded and has a tail, a form of D far removed from Greek *delta*. In inscriptions of the ninth century and of the earlier part of the eighth century at Sendschirli D is triangular, but has a tail. In Semitic inscriptions of the ninth, tenth, and twelfth centuries D is very similar to the corresponding Greek letter. V does not appear on the Cyprus Bowl, and in the eighth-century inscriptions at Sendschirli this letter is relatively far removed from Greek *vau*. An angular form of V which was very close to the corresponding Greek letter may be found, as we saw above, in the ninth-century inscription of King Kalamu at Sendschirli and in the thirteenth-century inscription at Byblos. The Z of the Cyprus Bowl and of the Sendschirli inscriptions of the second half of the eighth century is rather far removed from *zeta* of early Greek inscriptions. On the Cyprus Bowl the vertical stroke extends through the crossbars both at the top and at the bottom. In the Sendschirli inscriptions Z resembles very closely our Z. In Semitic inscriptions of earlier times, from the thirteenth century to the first half of the ninth century, Z is very similar to Greek *zeta*. The bar of the best form of Z on the Moabite Stone is not slanted to as great a degree as Professor Carpenter thought. The H of the Cyprus Bowl has three or more slanting crossbars and vertical strokes which are prolonged beyond the point of juncture with the crossbars. This form of H is certainly far removed from Greek *eta*. The H in the Sendschirli inscriptions of the eighth and the ninth centuries and of the Moabite Stone shows similar characteristics, but is somewhat more closely related to the corresponding Greek letter, while the same letter, as we saw above, at Byblos in the tenth and the twelfth centuries was very similar to Greek *eta*. A glance at the Tables will show that, after the twelfth century, there is no compelling reason to consider the I of any single early Semitic inscription as more closely related to Greek *iota* than is any other form of that letter in another inscription. The best forms of K on the Moabite Stone are almost equally as close to Greek *kappa* as are the best forms of K in the eighth-century and the ninth-century Sendschirli inscriptions. The forms of this letter on the Cyprus Bowl are only slightly closer to Greek *kappa*. There

is no justification for asserting that the L of the Cyprus Bowl was more like Greek *lambda* than is the L of several other early Semitic inscriptions, (1) the Byblos inscriptions of the thirteenth, twelfth, and tenth centuries, (2) the inscription of King Kalamu at Sendschirli, (3) the inscription on the statue of the god Hadad at Sendschirli, and (4) the inscription of King Barrekoub at Sendschirli. M and N were, in Semitic inscriptions from the middle of the ninth century onwards, very similar to Greek *mu* and *nu*. Professor Carpenter sees great difficulty in recognizing the ancestry of Greek *mu* and *nu* in the forms of M and N as employed, for example, on the Moabite Stone. An examination of these letters in Tables 1 and 2 will show that this difficulty has been greatly exaggerated. P does not appear on the Cyprus Bowl. The P in the inscription of King Barrekoub at Sendschirli is not a whit more closely related to Greek *pi* than are the best forms of P on the Moabite Stone. We need not discuss the forms of *tsade*, Greek *san*. The Q of the Cyprus Bowl can hardly be said to resemble Greek *koppa*. The circle at the top of the vertical stroke has not been completed as it is in Greek *koppa*: hence the letter on the Cyprus Bowl resembles our P. Furthermore, the Q of the inscriptions of the latter part of the eighth century at Sendschirli is very far removed in form from Greek *koppa*, for again the circle at the top of the letter has not been completed. It is needless, also, to discuss the forms of R and S, for they remain constant in Semitic inscriptions from the thirteenth century down to the eighth century. The T of the Cyprus Bowl is, indeed, very regular and stands erect, whereas in earlier Semitic inscriptions it stands diagonally. But this T may very well suggest Greek *tau*. The ninth-century inscription of King Kalamat Sendschirli, and the eighth-century inscriptions at Sendschirli preserve a form of T which resembles closely the form of *tau* found in the inscriptions on geometric pottery from Mount Hymettus.

Professor Carpenter thinks that the letter forms on the Moabite Stone are much too "archaic" to be considered the models of the corresponding Greek letter forms<sup>a</sup>. But, Z, K, and P, for example, were by no means as archaic as he thought. How could Professor Carpenter be so disturbed about the length of the cross stroke of the A and the slightly curved tail strokes of M and N on the Moabite Stone, when he did not see on the Cyprus Bowl any "archaic" characteristics in a D turned on its side, with a tail stroke, and transformed into an elongated triangle, a Q which did not have the typical circle at the top completed, and a Z with the vertical stroke extended through the crossbars both at the top and at the bottom of the letter? Professor Carpenter has asserted<sup>b</sup> that the A of the inscription of King Barrekoub at Sendschirli was *identical* in form with the A of the Cyprus Bowl. But the A of the former inscription has a cross stroke which is practically as long as the cross stroke of the corresponding letter on the Moabite Stone. Professor Carpenter asserted also<sup>b</sup> that L, M, and N on the inscription of King Barrekoub

<sup>a</sup>Rhys Carpenter, 10-11 (see note 38b, above).

<sup>b</sup>aCarpenter, American Journal of Archaeology 37 (1933), 14.

<sup>b</sup>b*Ibidem*.

were "practically indistinguishable from early Greek forms". The L of this inscription is regularly curvilinear; the M and N often have curved tails, and only on rare occasion stand in a vertical position. Professor Carpenter insisted, when he discussed the letter forms of the Moabite Stone, that such characteristics as those just noted were "archaic". Again, his arguments betray exaggeration of the "archaic" characteristics of the letter forms of the Moabite Stone. In short, Professor Carpenter has not brought forth any conclusive arguments to prove that the Greeks could not have adopted the Phoenician letter forms of the ninth century just as readily as they could have taken over the alphabet of the Cyprus Bowl.

A close study of the letter forms of the extant Semitic inscriptions of the eighth century and earlier will show that there was no definite, orderly development toward an alphabet from which all the letter forms of the early Greek alphabet could be derived. One may observe regression away from, as well as progress toward, the early Greek letter forms. A developed very rapidly in Byblos between the thirteenth century and the tenth century, and at the end of the tenth century the A employed at Byblos was not far removed from Greek *alpha*. From that time on the development of this letter toward the form of Greek *alpha* was almost negligible. Some of the forms of K on the Moabite Stone are not at all far removed from Greek *kappa*. By the end of the ninth century this letter was somewhat more like Greek *kappa*. The K of the Cyprus Bowl is best of all, by a very slight margin. Beginning with the Moabite Stone M and N were very close to the corresponding Greek letters. M and N of the Cyprus Bowl are a little closer to the Greek than are the same letters on the Moabite Stone. T first shows a tendency to develop toward Greek *tau* in a tenth-century inscription found at Byblos. In a ninth-century inscription from Sendschirli T, although slanted, is very close to Greek *tau*. It is very similar to the slanted *tau* which appears in the inscriptions on geometric pottery that Professor Blegen published a few months ago<sup>57</sup>. On the Cyprus Bowl T stands upright and is very similar to the most commonly known form of early Greek *tau*. Let us now consider the forms of those letters in which the development represented a regression away from the forms of the corresponding Greek letters. There was a steady development in D at Byblos between the thirteenth century and the tenth century. At the end of the tenth century D was extremely like Greek *delta*. The D of the Moabite Stone is equally as near to the corresponding Greek letter. By the end of the ninth century the D of Semitic inscriptions has assumed the form of a small triangle with a tail. In the inscriptions of the second half of the eighth century D assumes a rounded form, and has a tail that extends to such a length that D and R can be distinguished only with difficulty. On the Cyprus Bowl D appears four times out of five as an elongated triangle turned on its side. In three instances the letter has a tail stroke. The H of the thirteenth cen-

tury at Byblos was not far removed from the corresponding Greek letter. By the end of the tenth century this letter was very similar to the corresponding early Greek letter. This is an important fact, for the form of early Greek *eta* was very distinctive. After the ninth century Semitic H deviated farther from Greek *eta*. On the Moabite Stone H has two slanting crossbars and the vertical strokes project, both above and below, beyond the crossbars. The later Semitic H differs from that of the Moabite Stone mainly in having three crossbars instead of two. A Q which is very similar to early Greek *koppa* is employed in twelfth-century and thirteenth-century inscriptions at Byblos. Q then remains practically constant in form until the beginning of the eighth century. After the first part of the eighth century Semitic Q is farther removed from Greek *koppa*. The Z of the thirteenth-century inscription at Byblos is almost identical with early Greek *zeta*. This letter remained fairly constant until the beginning of the eighth century, but after that time it assumed a form more remote from early Greek *zeta*.

We see, clearly, that at some period between the eighth century and the thirteenth century there was fairly general similarity between the Semitic and the early Greek letter forms. I have remarked that early Greek *eta* was a distinctive letter form. The later forms of the Semitic H could only with difficulty be considered the precursors of Greek *eta*. An H which was very similar to Greek *eta* was used at Byblos in the thirteenth century, and, apparently, at the end of the tenth century. But the period of general similarity between the Greek and the Semitic alphabets cannot be assigned to a date as early as the tenth century. At this time K, M, N, and T are too far removed in form from the corresponding letters in early Greek. The period of general similarity between the Greek and the Semitic alphabets will also be at a time when we can account for the origin of Greek *kappa* and of the Western Greek *chi*. There is reason to believe that the Western Greek form of *chi* was developed out of an archaic Greek *kappa* which was very similar to the K employed at Byblos from the thirteenth century to the end of the tenth century<sup>58</sup>. The period of transition from the old to the new form of this letter in Semitic would be the time when one would most naturally expect to find the two forms in use. This transition was between the end of the tenth century and the middle of the ninth century<sup>59</sup>. The most archaic form of K found on the Moabite Stone could well be the precursor of both forms of the Western Greek *chi*, and the more developed forms of K on this stone could well be the precursors of Greek *kappa*. In other respects the letter forms of the Semitic inscriptions of the second half of the ninth century can very well be the precursors of the corresponding early Greek letter forms. The alphabet employed on the Moabite Stone and in the in-

<sup>57</sup>Carl William Blegen, Inscriptions on Geometric Pottery from Hymettos, American Journal of Archaeology 38 (1934), 10-28, and Plate III.

<sup>58</sup>Martin P. Nilsson, Die Uebernahme und Entwicklung . . . 1-30, especially 22-23 (see note 50, above, next to last paragraph); B. L. Ullman, The Added Letters of the Greek Alphabet, Classical Philology 22 (1927), 136-141. Professor Carpenter rejects the contentions of Nilsson on grounds which, he admits, are almost entirely theoretical. See American Journal of Archaeology 37 (1933), 21, note 3. In Table 2, Column 14, the Western Greek *chi* appears in the space allotted to *kappa*.

<sup>59</sup>The letter forms of the ostraca from Samaria may illustrate this transition (see note 50, above, third paragraph from the end).

scription of King Kalamu at Sendschirli is, with the exception of H, very similar to the early Greek alphabet. We must bear in mind two important facts. The Moabite country, from which the Moabite Stone comes, is southeast of the Dead Sea, and the dialect employed by the Moabites differed somewhat from that of the inhabitants of the Syro-Phoenician coast<sup>60</sup>. Sendschirli is located in North Syria relatively far from the Phoenician coastal towns. In this district Aramaic was spoken<sup>61</sup>. The alphabet that we find employed on the Moabite Stone and in the inscription of King Kalamu followed the general development of Semitic letter forms, but at the same time possessed certain local peculiarities<sup>62</sup>. Now no ninth-century inscriptions of Byblos are extant. What letter forms were likely to have been employed there at that time? We may safely assume that Byblos, a thriving and progressive coastal town, would have employed letter forms which would not have lagged behind the general Semitic development as we see it on the Moabite Stone and in the ninth-century inscription of King Kalamu. In that case, K, M, N, and T, which had been rather remote from the corresponding Greek letters in the tenth-century inscriptions at Byblos, would have assumed, by the latter half of the ninth century, forms very much like those on the Moabite Stone and in the inscription of King Kalamu. K, M, N, and T would have been very similar to the early Greek letters. The Semitic H which bears the closest resemblance to early Greek *eta* was employed at Byblos between the thirteenth century and the tenth century. An H equally close to the corresponding Greek letter appears in the ninth-century Gezer Calendar<sup>63</sup>. It is, then, very probable that an H of a form similar to that of the preceding century was employed at Byblos in the ninth century. We conclude that, in the second half of the ninth century, the letter forms employed in inscriptions at Byblos were very similar to those of early Greek inscriptions and that, probably, the Greeks adopted the Phoenician alphabet in the latter half of the ninth century. They adopted then some form of the Semitic alphabet which was very similar to the alphabet that was employed at Byblos at that time.

Confirmation of the conclusion just reached may be found in the inscriptions on geometric pottery recently published by Professor Blegen<sup>64</sup>. This pottery was found by Professor Blegen about ten years ago in the course of excavations on Mount Hymettus<sup>65</sup>. The

<sup>60</sup>G. A. Cooke, *A Text-Book of North-Semitic Inscriptions*, 5 (see note 55, above).

<sup>61</sup>Mark Lidzbarski, *Handbuch der Nordsemitischen Epigraphik*, I, 108 (see note 55, above).

<sup>62</sup>The inscription of King Kalamu at Sendschirli, although written in the pure Phoenician dialect, was engraved in the local alphabet of Sendschirli. See Mark Lidzbarski, *Ephemeris für Semitische Epigraphik*, 3 (1909-1915), 222 (Giessen, Töpelmann [formerly Ricker], 1915).

<sup>63</sup>Mark Lidzbarski, *An Old Hebrew Calendar-Inscription from Gezer*, Palestine Exploration Fund, Quarterly Statement, 1909, 26-29, especially Figure 1, page 28.

<sup>64</sup>Blegen, *American Journal of Archaeology* 38 (1934), 10-28 (see note 57, above).

<sup>65</sup>*Art and Archaeology* 16 (1923), 207-208, 17 (1923), 285-286; *American Journal of Archaeology* 28 (1924), 337.

vases were made at about 750 B. C. and the inscriptions were painted on the vases at that time. Professor Blegen notes that the letter forms of these inscriptions are more regular than those of other early Greek inscriptions and that the letters *phi* and *chi*, which were not Phoenician letters and which were added by the Greeks after they had taken over the Phoenician alphabet, are employed<sup>66</sup>. He therefore justly concludes that the letters that appear in the inscriptions on these vases are not to be considered as belonging to the earliest stage of the Greek alphabet. In fact, the letter forms of the Dipylon Vase are less regular, and the added letters of the Greek alphabet, *phi* and *chi*, are not employed on that vase<sup>67</sup>. Between the adoption of the Phoenician alphabet and the writing of the Hymettus inscriptions fifty years, or a few more, we may safely assert, elapsed, so that, on different grounds from those advanced above, we conclude again that the Greeks took over the Phoenician alphabet in the latter half of the ninth century.

We saw above (page 69) that, in the present state of our knowledge, it is safest to conclude that relationship between Greeks and Eastern peoples was not renewed until the early part of the eighth century. This conclusion does not force us to believe that it was impossible for the Greeks to become acquainted with the Phoenician alphabet before 800 B. C. Egyptian scarabs which are to be assigned to a date within the so-called Dark Ages of Greece have been found on the Hellenic mainland<sup>68</sup>. Evidently, indicates, that Greek(s) visited Egypt and brought souvenirs back to Greece. In somewhat the same way, I venture to suggest, the Phoenician alphabet could have been brought to Greece in the latter part of the ninth century—perhaps via Rhodes<sup>69</sup>, for<sup>70</sup> “beyond doubt... Rhodes alone of the Aegean lands kept up close contact with Egypt throughout every period from the Late Bronze Age”.

On the basis of our present knowledge, we are justified in concluding that the Greeks took over the Phoenician alphabet not long before 800 B. C. The date which Professor Carpenter advocates for this occurrence is at least a century too late.

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<sup>66</sup>Blegen, *American Journal of Archaeology* 38 (1934), 26 (see note 57, above).

<sup>67</sup>Herman Roehl, *Imagines Inscriptionum Graecarum Antiquissimarum in Usum Scholarum*, page 69, No. 1 (Berlin, Reimer, 1907); Blegen, *American Journal of Archaeology* 38 (1934), 26-27. The Dipylon Vase was made in the eighth century, but many scholars have insisted that the inscription on it was written in the seventh century, or even in the sixth century. However, a comparison of the letter forms on this vase and of those on the geometric vases from Mount Hymettus would seem to show, as Professor Blegen asserts, that the inscription on the Dipylon Vase was written in the eighth century. There now seems to be no reason to doubt that we have several authentic inscriptions of the eighth century on geometric vases. Professor Blegen records a list of these inscriptions on page 27 of his article which is cited above, in this note. Eighth-century inscriptions, on geometric vases, were recently found at Corinth. See Agnes Newhall Stillwell, *Eighth Century B. C. Inscriptions from Corinth*, *American Journal of Archaeology* 37 (1933), 605-610.

<sup>68</sup>J. Cohn, D. C. Evitts, S. Stringfellow, *Pendlebury, Aegyptiaca. A Catalogue of Egyptian Objects in the Aegean Area*, 79 (Cambridge: At the University Press, 1930).

<sup>69</sup>Rhys Carpenter, *American Journal of Archaeology* 37 (1933), 27-28 (see note 38b, above).

<sup>70</sup>J. D. S. Pendlebury, *Aegyptiaca*, vii (see note 67, above).